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Compassion Fatigue Following the September 11 Terrorist Attacks: A Study of Secondary Trauma among New York City Social Workers

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Abstract

Experience suggests that individuals working in the caring and psychotherapeutic professions are among those to provide mental health services to disaster victims suffering from psychological trauma following catastrophic events. Yet, few studies have focused on the emotional exhaustion from working with such clients, referred to as compassion fatigue (CF) in this study, and how CF differs from other occupational hazards, such as secondary trauma (ST) and job burnout. In the present study, we used recently validated scales to predict ST and job burnout related to providing services to those affected by the World Trade Center (WTC) attacks. Our study data were based on a random survey of 236 social workers living in New York City (NYC), over 80% of which reported being involved in post-WTC disaster counseling efforts. Our analyses indicated that controlling for demographic factors, years of counseling, and personal trauma history, ST was positively associated with WTC recovery involvement ($p < .001$) and negatively associated with having a supportive work environment ($p < .01$). In contrast, job burnout was negatively associated with having a supportive work environment ($p < .01$), but not associated with WTC involvement or WTC counseling efforts. We discuss these results in light of future conceptual and empirical research needs.

Keywords

compassion fatigue; vicarious traumatization; secondary trauma; posttraumatic stress disorder; PTSD; occupational medicine; outcome research

Studies of informal care giving have shown that providing social support to persons facing stressful events can be both rewarding and stressful (Ohaeri, 2003; Schulz et al., 1997). Clinicians and researchers often have referred to the stress of providing such support as “burden of care” (Ohaeri, 2003). In addition, studies also have focused on the emotional impact of interactions with traumatized clients among formal caregivers, such as therapists, child-protection workers, nurses, and others (Figley, 1995; 1999). Research suggests that individuals working in the caring and psychotherapeutic professions are among those likely to suffer

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adverse psychological consequences resulting from direct client activities (Figley, 2002b; Sabin-Farrell & Turpin, 2003). Given the strategic role of these workers in the child protection, health care, mental health, and social service sectors, understanding the occupational and environmental impact of this work on the mental health, job satisfaction, productivity, and job retention of these professionals is paramount.

Although the psychological consequences of working with traumatized clients have been noted for some time (Figley, 1995; 1999), conceptual and measurement clarity has been lacking. Currently, the research literature describes the adverse impact of working with clients who have a history of trauma (e.g., sexual and physical abuse, military combat, and community disaster) under a variety of terms: vicarious traumatization, compassion fatigue, and secondary traumatic stress. For the present study, we use the term compassion fatigue (CF). We define CF as the reduced capacity or interest in being empathic or "bearing the suffering of clients" and is "the natural consequent behaviors and emotions resulting from knowing about a traumatizing event experienced … by a person" (Figley, 1995, p. 7). We assert that Figley's concept is an important one, because it implies that the psychopathology associated with psychological trauma can be vicariously transmitted through the therapeutic process. We suggest that while this concept may seem controversial, it is no more radical than the concept of "vicarious learning" advocated by social learning theorists three decades ago (e.g., Bandura, 1969). What has been missing, however, has been the empirical validation of this concept.

Research on CF has suffered from both conceptual and methodological limitations. Conceptually, researchers have attempted to differentiate compassion fatigue from job burnout, vicarious trauma, and general psychological distress, but the terms have remained vague (Jenkins & Baird, 2002; Sabin-Farrel, & Turpin, 2003; Salston & Figley, 2003). There has also been little research on how CF relates to a history of trauma, social support, coping strategies, or the stress process in general (Kassam-Adams 1999; Nelson-Gardell & Harris, 2003; Salston & Figley, 2003; Schauben & Frazier, 1995). Lack of conceptual clarity has hindered implementation and measurement of these concepts and has impaired empirical development. Methodologically, there have been several CF scales proposed, but few validation studies, with little information on the psychometric properties of the scales used (Figley, 1999; Gentry, Baranowsky, & Dunning 2002; Stamm, 2002). Previous studies have also often failed to include a comparison group that has not been exposed to traumatized clients (to control confounding variables such as the counselor's own trauma experiences), to examine organizational or other factors that may increase the vulnerability of a therapist to CF, and to implement research to assess the causal relationship between client exposure and CF (Jenkins & Baird, 2002; Pearlman & Maclan, 1995; Schauben & Frazier, 1995). The consequence of these conceptual and methodological problems has been contradictory results and the general finding that most professionals providing trauma therapy have little difficulty in coping with the demands of their work (Sabin-Farrel & Turpin, 2003). Conceptual clarity and more rigorous study designs, we think, can assist in the identification of the professional caregivers most vulnerable to CF and advance our understanding of the potential occupational and environmental hazards of this work.

To address these issues, the objectives of the current study were to assess the potential prevalence of CF among social workers who cared for victims of the September 11 attack in New York City, and to test the hypothesis that, controlling for demographics, trauma history, and social support, social workers more involved in counseling victims of the attack were at greater risk for compassion fatigue. In addition, we also sought to test the hypotheses that, controlling for demographics, trauma history, and social support, social workers that had a supportive work environment would be protected from CF. Furthermore, we sought to test if, with the exception of having a supportive work environment (which would be protective), predictors of job burnout would be different from CF and consistent with this syndrome, such

as associated with years in practice. If these hypotheses were confirmed, we believe validation for the concept of CF would be provided and would advance the field significantly.

Method

The data were based on a survey of social workers living in New York City (NYC). Our study's sampling frame included all social workers with a master's degree in Social Work or higher who were current members of the National Association of Social Workers (NASW). The NASW is the main social work organization that has approximately 50% of all practicing social workers as members. From the membership list, we randomly selected 600 social workers with NYC addresses and mailed them a questionnaire between May 12 and May 15, 2003. A second questionnaire was mailed two weeks later and a follow-up letter two weeks after that to remind the social worker to return the survey. All surveys were returned anonymously by respondents using postage-paid return envelopes addressed to the study sponsor. Returned surveys were accepted until August 31, 2003. Since we were mainly concerned with social workers who potentially suffered from secondary trauma by working with traumatized clients, we asked those in the sample who were not engaged in direct practice to indicate this on the survey when they returned their questionnaire. Overall, 236 clinically active social workers returned completed surveys and 38 returned the surveys indicating that they were not working directly with clients. The latter respondents were excluded from our analyses. None of the addresses appeared to be out of date or incorrect, as none of the questionnaires/letters from the mailings were returned by the Post Office. Thus, the overall survey completion rate was 46% (236 +38/600). The Institutional Review Board for the New York Academy of Medicine reviewed and approved the study's protocols.

Study Outcome Variables

Our study focused on two main outcome measures: compassion fatigue and job burnout. The items for these scales were derived from the 30-item Compassion Fatigue Scale-Revised (Gentry, Baranowsky, & Dunning, 2002). This scale was developed by Figley (1995) based on clinical experience and employed in several previous studies (e.g., Gentry et al., 2002; Stamm, 2002). Specifically, this scale asked respondents to rate each item as it related to their "work/life situation" using a 10-point Likert scale (1=rarely/never to very often=10). Using our sample of social work practitioners, we first assessed the psychometric properties of this scale. Our analyses indicated that the original 30-item scale measured seven underlying factors (Adams, Figley & Boscarino, 2004). Eliminating items using factor analyses based on principal components and varimax rotation produced two clear scales that independently measured secondary trauma (ST), also called vicarious trauma, and burnout. Both of these concepts were explicitly incorporated into the original CF scale items. The advantage of using separate scales is that they contain fewer items overall (13 versus 30), while remaining highly correlated with the original 30-item CF scale (Adams et al., 2004). In addition, with separate scales we could explicitly test the hypothesis that ST is different from burnout, which was suggested by the original validation study (Adams et al., 2004).

A second goal of our validation study was to assess the validity of the original 30-item CF scale and two reduced item scales for ST and burnout by examining their associations with other well-known and valid scales (Adams et al., 2004). All three scales (i.e., the original 30-item CF scale, the 5-item ST scale [ST-5], and the 8-item job burnout scale [JB-8]) were all correlated with psychological distress and psychological resource variables in the expected directions (Adams et al., 2004). Except for their relationships with the General Health Questionnaire (Goldberg & Huxley, 1992), inter-correlations between these scales were small. In summary, our initial validation study supported the concept that CF is a unique feature of

the workplace environment and is not merely a different conceptualization for negative life events, personal trauma, or lack of social support. (Adams et al., 2004).

Finally, we also tested the predictive capabilities of the ST and burnout scales in a multivariate model. The regression findings indicated that the CF 30-item, the JB-8, and the ST-5 scales were good predictors of psychological distress, even after controlling for demographic, stress, and psychological resource factors. These scales, therefore, seemed to be valid as assessment tools to identify care-giving professionals at risk for ST, burnout, and psychological problems (Adams et al., 2004). Based on our initial validation study, in the present study we used the ST-5 and the JB-8 scales. For this study, the ST-5 scale items (Cronbach's alpha = .80; mean = 4.80; SD = 5.54) and the JB-8 scales items (Cronbach's alpha = .90; mean = 10.78; SD = 11.30) were summed, respectively, to form composite scores. Both the ST-5 and JB-8 items were rescaled to 0–9 (from 1–10) in this study. Consequently, the score ranges for the ST-5 and JB-8 were 0–30 and 0–54, respectively. The actual ST-5 and JB-8 scales used are included in the study appendix.

Predictor Variables

Our analyses contained three demographic variables: gender, race/ethnicity, and years working in professional counseling. Gender and race/ethnicity were dummy coded with female and white coded as 1, otherwise 0. Years in professional counseling were coded into four ordinal categories, including 10 years or less (=1), 11 to 20 years (=2), 21–30 years (=3), and 30 years or more (=4). Since marital status is often considered to be a reasonable measure of social support (Veiel & Baumann, 1992), we used this variable (coded: married =1; not married=0) as a general indicator of this in our analyses.

We also included four stress-related variables in our analyses. Based on previous World Trade Center (WTC) disaster studies (Boscarino et al., 2002; 2004), our survey had 13 items relating to different ways of helping "those affected by the September 11 attacks" (e.g., involved in supporting rescue or recovery efforts, gave shelter to displaced people, helped to lower rescue workers' stress, etc.). We summed these ways of involvement into the following ordinal scale: no/little involvement (0–1 ways=1), low involvement (2 ways=2), moderate involvement (3 ways=3), high involvement (4 ways=4), and very high involvement (5 or more ways=5). We also had seven questions about counseling people exposed to the September 11 WTC attacks (e.g., counseling those who directly witnessed the events, lost a spouse, or knew someone who was killed, etc.) categorized as "yes" vs. "no." We summed these September 11 counseling activity questions into an ordinal scale, including none/little (0–1 activities=1), low (2 activities=2), moderate (3 activities=3), high (4 activities=4), and very high (5 or more activities=5). In order to measure exposure to other traumatized clients, we also asked participants what percentage of their current clients were survivors of violence (physical/sexual). Respondents were divided into "low" exposure if less than 20% of their clients were victims of violence (coded=0) and "high" exposure if 20% or more of their clients were victims (coded =1). Finally, our survey inquired about eight traumas that the social workers could have experienced during their lifetimes (e.g., being attacked or assaulted, in a serious accident, in a war zone, etc.; Boscarino et al., 2004; Freedy, Kilpatrick, & Resnick, 1993). These traumas were collapsed into an ordinal scale that included: no, traumatic events (none=1), 1 traumatic event (low=2), 2 traumatic events (moderate=3), 3 traumatic events (high=4), and 4+ traumatic events (very high=5).

We also assessed a key dimension of the respondent's work environment: having information to work effectively with clients. This variable was the sum of two items (Information needed to enhance the delivery of my services to my clients or patients has been readily available to me; and I have adequate information about how to control my emotional fatigue through such

strategies as deep breathing, positive self-talk, and the appropriate use of humor.). These scale items were developed based on clinical experience (Figley, 1995; Figley, 2002a). The response options for these two items were based on a 5-point Likert scale, ranging from "strongly disagree" (coded 1) to "strongly agree" (coded 5). Both of these scale items were summed together to form a composite indicator (mean = 8.34, SD = 1.22). Thus, higher scores on this scale indicated that the social worker was in a more supportive work situation.

To test the contribution of our independent variables in predicting ST and job burnout, we estimated ordinary least-squares (OLS) regressions with the demographic, stress, and resource variables discussed as predictor variables. Since our hypothesis was that when controlling for demographics, trauma history, and social support, social workers more involved with victims of September 11 were at greater risk for ST and those who were in more supportive work environments would be protected from both ST and job burnout, we developed two separate multivariate regression models. Since both ST and burnout were skewed, we log transformed both of these outcome variables for the regressions. We assessed the goodness of fit for both models and provide the beta coefficients for each variable in the final model, as well as the R^2 for each model, respectively. Our regression analyses and descriptive statistics were conducted using SPSS, version 11.5.

In addition to descriptive statistics and hypothesis testing, we also examined potential cutoff scores for our ST scale. To do this, we did the following: Based on results from the 12-item version of the General Health Questionnaire (GHQ-12), we defined a "case" as social workers who scored above the 95 percentile (i.e., a score of 7+ on the GHQ-12 scale), which indicated a clinically high level of psychological distress (Goldberg & Huxley, 1992). The GHQ scale, based on a 4-point Likert scale, was designed to be a general screening instrument for psychological problems in a general population (Goldberg & Huxley, 1992). This scale has been widely used and has been shown to have good validity and reliability (Cronbach's alpha = .80; McDowell & Newell, 1996). Next, we computed a receiver operating curve (ROC) analysis (Pepe, 2003) predicting a GHQ-12 case using our raw ST-5 score results (score range 0–30) with Stata version 7 (Stata Corporation, 2001). Our ROC analysis indicated that a score of 7 or higher on our ST scale had 79% sensitivity and 76% specificity in defining a case on the GHQ-12 (area under the ROC curve = 78%; Pepe, 2003). Finally, based on this ST-5 cutoff score of 7 or higher, we compared the prevalence of ST cases in our study by both low vs. high September 11 involvement and counseling, in order to examine the predictive value of our defined cutoff point. All p-values were based on two-tailed tests.

Results

Table 1 shows the distribution of our study sample of NYC social workers. As can be seen these individuals tended to be female, white, and over 50 years old. Based on available data, these demographics appear to be generally representative of social workers in NYC with an MSW degree or higher. In addition, more than 50% reported being exposed to two or more traumatic events in their lifetimes and 19% were currently seeing a substantial number of patients (20% or higher) who were victims of violence. Finally, 38% were moderately to extensively involved with the WTC recovery efforts and 67% were moderately to extensively involved with counseling persons affected by the WTC disaster. Only 16% of the social workers had no or little involvement with counseling those exposed to WTC attacks (see Table 1).

Table 2 presents the results that tested our hypotheses related to ST and job burnout. In both cases, we show the results for all variables entered into the model simultaneously. As can be seen, September 11 recovery involvement in the ST model was highly significant (Beta = .233, $p < .001$), as was supportive work environment (Beta = −.196, $p < .01$). By comparison, in the burnout model, only having a supportive environment was significant. In addition, being

married was marginally significant (Beta = −.128, $p < .10$), as were years of professional counseling in the burnout model (Beta = −.115, $p < .10$). It should be noted that key predictor variables generally were in hypothesized directions. In the case of ST, for example, involvement in recovery efforts was positively related to ST ($p < .001$) and having effective work support was negatively related ($p < .01$). Likewise, job burnout was negatively (i.e., inversely) related to being married ($p < .10$) and having effective work support ($p < .01$). Job burnout was also negatively related to years working as a professional counselor ($p < .10$), which is counter to our expectations. In addition, since WTC recovery involvement and WTC counseling involvement tended to be correlated (r=.322, $p < .001$), we conducted two separate multivariate OLS models for ST and burnout separately for each of these outcomes (total of four models). The major finding was that WTC counseling involvement was now significant ($p < .05$) in the ST model without WTC recovery involvement, suggesting that the latter was suppressing the effects of the former.

As noted, based on our clinical and ROC analyses discussed, the case cutoff point for our ST-5 scale was defined as a score of seven or greater. We tabulated recovery and WTC counseling by this cutoff point and these results are shown in Figure 1. As can be seen, 52% of those with high recovery involvement were defined as a potential ST case, compared with 25% for those with low involvement ($p < .02$). In the case of high counseling involvement, 35% were potential ST cases compared with 25% for those who were low on this variable (p = ns).

Discussion

To our knowledge, this study is the first to fully test the compassion fatigue/vicarious trauma concept. This concept proposes to explain the negative experiences among therapists resulting from provision of therapeutic/counseling services to victims of psychological trauma. This research appears to support the concept that a group of mental health professionals working with traumatized victims were at greater risk for CF, controlling for demographic factors, personal trauma history, social support, and work environment factors. Furthermore, we suggest that the idea that compassion fatigue/vicarious trauma is unique to mental health professionals may be shortsighted. As we noted, among nonprofessional caregivers, the psychological burden of providing care has been delineated (Ohaeri, 2003). We suggest that the important variables in predicting CF include degree of exposure, personal history, social support, and environmental factors, predictor variables that would likely have an effect among lay caregivers as well. As we have seen in our study, however, job burnout appears to be a different and unique syndrome from ST, although the work environment appears to have an impact on both of these outcomes.

There are several study limitations that make our conclusions tentative. One was that the sample was somewhat smaller than desired for our factor analysis (Grice, 2001). Nevertheless, the JB-8 and ST-5 scales are consistent with all aspects of secondary traumatic stress as developed by Figley (1995; 2002a). Given the overall consistency of our results, there is little reason to believe that they were overly biased due to sample size. Another limitation was the cross-sectional nature of the data. Because of this, we could not disentangle the casual ordering of exposures, psychological distress, and CF. Theoretically, Figley (1995) and others (Jenkins & Baird 2002; Schauben & Frazier 1995) have assumed a causal relationship from exposure to psychologically traumatized clients to CF. It is possible, however, that psychologically distressed professionals may have developed the CF-like symptoms due to personally-experienced traumas and not from client interactions. These professionals may also have a propensity to counsel traumatized clients more often, as well as to interpret their experience differently. This study was able to somewhat circumvent these limitations, however, because our study focused the variable impact of a specific, time-bounded event – the World Trade Center disaster.

A further limitation reflects the evolving conceptualization of CF. It has been suggested that CF scales should have both positive and negative items and measure both CF and compassion satisfaction (Stamm, 2002). The present study used one version of the Figley Scale, which did not contain satisfaction or reverse-worded items. This ongoing development process makes research results more tentative. Since one of our goals was to develop instruments with relatively few items that measured Figley's original conceptualization, we selected a version of the Compassion Fatigue Scale with 30 items, rather than longer 40 or 66 item versions (Figley 1995; Stamm 2002). Nevertheless, examination of all versions of the scale might be necessary before the optimal scale items are identified. Other measurement limitations in our study were related to some of our predictor variables as well. For example, our measures for social support, work environment, counseling involvement, and trauma exposures were limited due to questionnaire length.

Finally, it may not be possible to generalize our results beyond social workers practicing in New York City. Although social workers nationwide may face similar work problems as those in NYC, there may be other aspects unique to different regions of the country. This may be especially true in NYC following September 11 and may account for the high level of potential ST (27%) found in our study. For example, more than 90% of social workers surveyed reported that they were directly involved with WTC rescue, recovery, or counseling efforts in some way. In addition, psychiatrists, psychologists, and other trauma workers may have different responses to working with survivors of traumatic experiences. There may be other work or personal issues that vary across different occupational settings. For example, as suggested, a counselor's own history of trauma may influence how they select their clientele or the kinds of care they give (Figley 1995; Nelson-Gardell & Harris 2003; Salson & Figley, 2003). Research on counselors working with survivors of sexual violence found high rates of personal experience with violence (Schauben & Frazier, 1995), so this is clearly an important confounding variable, which we attempted to control for in our study.

However, despite these study limitations, to our knowledge, this was the first study to validate the concept of CF as a multivariable construct comprising of ST and burnout (Gentry et al., 2002). As was seen, all major aspects of Figley's original formulation have been confirmed in a study related to a major catastrophic event. We believe that this preliminary study will help advance the field and guide future research. Mental health professionals, and social workers in particular, are an important human resource asset in the "frontlines" of our health care system and warrant our oversight and surveillance.

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Appendix

Study Appendix Compassion Fatigue Scale - Short

Consider the following items about your work/life situation. Write the number that best reflects your experiences using the following rating scale, 1 through 10:

Never/Rarely **Sometimes** **Very Often**

1.....2.....3.....4.....5.....6.....7.....8.....9.....10

___ a. I have felt trapped by my work.

___ b. I have thoughts that I am not succeeding in achieving my life goals.

___ c. I have had flashbacks connected to my clients.

___ d. I feel that I am a “failure” in my work.

___ e. I experience troubling dreams similar to those of a client of mine.

___ f. I have felt a sense of hopelessness associated with working with clients/patients.

___ g. I have frequently felt weak, tired or rundown as a result of my work as a caregiver.

___ h. I have experienced intrusive thoughts after working with an especially difficult client/patient.

___ i. I have felt depressed as a result of my work.

___ j. I have suddenly and involuntarily recalled a frightening experience while working with a client/patient.

___ k. I feel I am unsuccessful at separating work from my personal life.

___ l. I am losing sleep over a client's traumatic experiences.

___ m. I have a sense of worthlessness, disillusionment, or resentment associated with my work.

[ST-5 = c, e, h, j, l; JB-8 = a, b, d, f, g. i, k, m]

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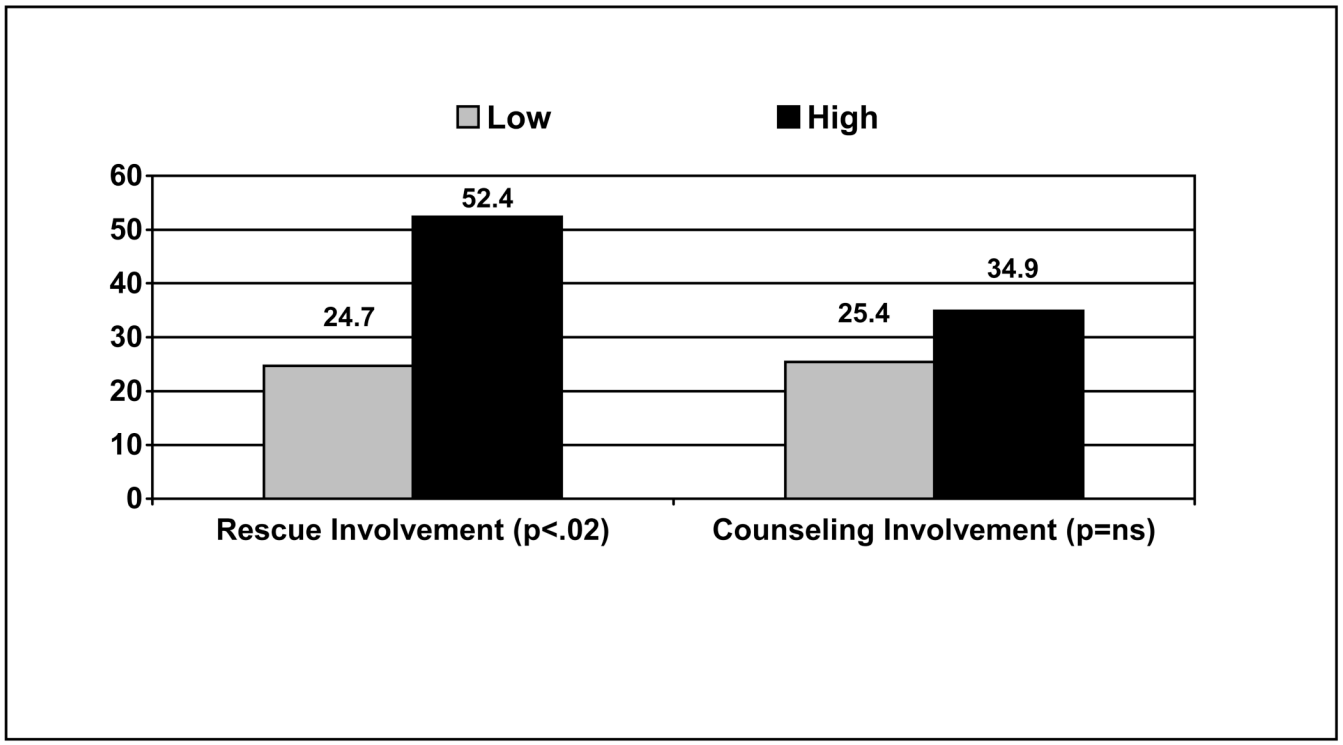

Figure 1.
Percent Potential Secondary Trauma Cases by Low vs. High Clinical Involvement in September 11 Attack Activities

Table 1

Study Sample Characteristics: Profile of New York City Social Workers Following the September 11 Terrorist Attacks (N=236)

Sample Characteristics	N	% Sample/Mean
% Gender		
Male	47	20.5
Female	182	79.5
% Race		
White	207	88.5
African American	5	2.1
Hispanic	14	6.0
Other	8	3.4
% Age		
49 or less	39	17.2
50–59	113	49.8
60+	75	33.0
% Marital Status		
Married	135	57.7
Not Married	99	42.3
% Has Children Under 18		
No	176	75.2
Yes	58	24.8
%Years Counseling Experience		
10 years or less	13	5.6
11–20 years	76	32.6
21–30 years	110	47.2
30+ years	34	14.6
% Lifetime Traumatic Events		
None	43	18.2
Low (1 event)	57	24.2
Moderate (2 events)	55	23.3
High (3 events)	40	16.9
Very High (4+ events)	41	17.4
% WTC Recovery Involvement		
None/Little (<2 activities)	100	42.2
Low (2 activities)	46	19.5
Moderate (3 activities)	45	19.1

Sample Characteristics	N	% Sample/Mean
High (4 activities)	24	10.2
Very High (5+ activities)	21	8.9
% WTC Counseling Involvement		
None/Little (<2)	37	15.7
Low (2)	40	16.9
Moderate (3)	50	21.2
High (4)	66	28.0
Very High (5+)	43	18.2
% Current Clients Who Were Victims of Violence		
Less than 20%	191	80.9
20% or more	45	19.1
Mean Work Environment Support Score (SD=1.22)	226	8.34
Mean Secondary Trauma Score (SD=5.54)	236	4.80
Mean Job Burnout Score (SD=11.30)	236	10.78

Table 2

Predicting Secondary Trauma and Job Burnout among New York City Social Workers Following September 11 Attacks (N=220)

	Secondary Trauma			Job Burnout		
Predictor Variable	b	s.e.	Beta	b	s.e.	Beta
Female Gender	.100	.152	.043	−.089	.180	−.033
Married	−.089	.127	−.047	−.285†	.151	−.128
White Race	.279	.198	.094	.327	.234	.095
Years Professional Counselor	−.078	.081	−.064	−.161†	.095	−.115
WTC Recovery Involvement	.166***	.050	.233	.026	.060	.031
WTC Counseling Involvement	.048	.041	.081	.065	.049	.094
% Current Clients Violence Victims (20% or more)	.030	.154	.013	.015	.182	.005
Lifetime Trauma Events	.050	.047	.072	.062	.055	.076
Work Environment Support (had information to work effectively)	−.151**	.052	−.196	−.163**	.061	−.180
Constant	1.992***	.528	---	3.312***	.625	---
R^2	.12			.10		

† $p<.10$

** $p<.01$

*** $p<.001$